

IN MEMORIAM

G. Edgar Folk, Jr.

The professional lifetime of Solco W. Tromp – a primary advocate of environmental influences

Received: 20 September 1993 / Accepted: 6 October 1993

Dr. Tromp had an imaginative and creative approach to experiments concerned with the subtle effects of the physical environment. His curiosity was not hampered by excessive caution. At one time a fine scientist of international fame said to me: "I don't know why Solco gives his time and energy to those subtle environmental factors." He said this because at that time Dr. Tromp was interested in experiments aimed at predicting whether the fetus of a pregnant woman was male or female. The scientist who questioned this approach to environmental matters is not alive today, but if he were, he would be quite surprised at how right Dr. Tromp was, and how wrong the question was.

To give an illustration, in approximately 1950 an excellent scientist at the Rockefeller Institute wrote an article to show that influences of magnetism could not be involved in navigation of birds. He based his arguments on the amount of energy it takes to stimulate sense organs and nerve endings. This scientist came to regret having published that article. The responses to magnetic fields, especially because of the definitive experiments of Professor Frank Brown, are nowadays well accepted. A few weeks ago in the journal, there was a description not only of the magnetic sense which assisted the orientation of sea turtles, but a description of how this magnetic sense is calibrated by the turtles depending upon the intensity of light on the horizon (see also Lieth 1991). Dr. Tromp was right to be interested in the subtle effects of environmental factors.

Dr. Tromp founded the Biometeorological Research Centre in Leiden in 1955. Here he was a bench worker in Clinical Human Physiology, collecting data assiduously as one source of his contributions to the literature on environmental effects on human subjects. For a second source, the Leiden Hospital was fortunate having him to make use of their records and to act as a stimulus to

their record-keeping. In 1956 he and Sargent founded the International Society of Biometeorology (then Bioclimatology).

In his interests he was a "Renaissance Man". The following list provides a sample of topics on which he published at least three papers or many more. Correlations between weather changes and: cancer incidence; cardiovascular disease, especially Raynaud's disease; mental health; asthma attacks; physical changes in human blood; respiratory disease; suicide; arthritis attacks; rheumatic attacks; accidents and crime; Foehn "disease".

In the first part of his career, he published on the epidemiology of many of the phenomena in the above list. Later on, he became interested in the relationships between weather, health, and socio-economic factors. This led him to an interest in urban environments and even air conditioning. Scattered through various aspects of his career, we find physiological studies; he developed and published methods such as the bath test for temperature equilibrium. After numerous fundamental and theoretical tests, he began to apply these tests to various kinds of patients and even to pregnant women. He called this procedure a "test of thermoregulatory efficiency". He also did studies on high altitude physiology; from these experiments he developed what he called "climato-therapy". Many of his experiments were concerned with the possible effect of altitude on asthma and bronchitis.

At one time he completed a series of studies on blind young boys. There were various physiological measurements and especially a detailed analysis of urine samples. He was inspired by the results from these experiments to pursue more detailed investigations on the physiological clock, which is still evident in blind individuals. From this time on, he did many experiments or analyses concerned with the long or short rhythmic phenomena which he found in his own data.

The background of Dr. Tromp's work habits which led up to his publications is worth elucidating. His bibliography includes 208 titles, 16 of which are hardbound

G.E. Folk
Department of Physiology/Biophysics,
The University of Iowa, Bowen sciences Bldg,
Iowa City, IA 52242, USA

Table 1 Publications of Solco W. Tromp

Hard-cover books on biomedical topics or medical geography: editor-in-chief or author	16
Monographs: author or co-author	13
Institute reports: author	17
Refereed journal articles	31
Articles in society proceedings	40
Published lectures, reviews, and chapters in books, encyclopaedias, or handbooks	88
Total	205

books for which he was author or editor in chief (see Table 1). Some of the individuals with whom he published were D.B. Dill, Fred Sargent, and Wolf Weihe. He wrote chapters in books published by the American Physiological Society, Saunders, and Wiley Press. His productivity is related to his popularity as an international figure. He was invited to plan symposia or take part in them in nine other countries; there were many "repeat engagements". His approach was to present new

data from his Institute. Afterwards, instead of leaving the new information "frozen", as many of us do, he would rewrite the material from these proceedings for an Institute Report; then once again, he would use the material in a book chapter. Finally, he would refine the material for a refereed journal. His vigour and the stimulus of his personality will be missed for many years in the field of Biometeorology.

References

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